

PROJECT DESCRIPTION

I. GENERAL

This project involves the installation of a new traffic control signal at the intersection of MD 228 and Manning Road in Prince George's County, Maryland. MD 228 is considered to run in an east/west direction.

II. INTERSECTION OPERATION

The intersection is to operate in a NEMA six (6) phase, full-traffic-actuated mode. There will be an exclusive/permissive left turn phase for the east and westbound movements of MD 228. The MD 228 through movements will operate concurrently. The Manning Road movements will operate in a side street split phase mode.

An eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up, Video camera equipment opticom equipment and (1) four-channel rack mounted time delay output loop detector amplifier housed in a base mounted cabinet are to be installed at this location.

EQUIPMENT LIST

A. Approved S.H.A. equipment to be purchased by the Developer and installed by the Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
2	EA	818	27 ft. steel mast arm pole with a 70 ft. mast arm
1	EA	818	27 ft. steel mast arm pole with 50 ft. mast arm
1	EA	816	Standard S.H.A. traffic signal controller, base mounted cabinet, video detection system, opticom equipment, and one (1) four-channel loop detector amplifier. [Note: Controller and cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650].
4	EA	---	Video detection camera (to include detector cable). [two - 400 LF, one - 500 LF, one 200 - LF]
2	EA	---	Opticom detector (single edge - mast arm mount)
4	EA	814	12 in., one-way, three section (R,Y,G) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, four section (R,Y,G,GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, five section (R,Y,YA,G,GA) adjustable black faced traffic signal head with mast arm mounting hardware and tunnel visors.
1	EA	814	8 in./12 in., one way, five section (8 in. R,Y,G/ 12 in. YA,GA) adjustable black faced signal head with pole mounting hardware and tunnel visors.
1	EA	814	8 in./12 in., one-way, five section (8 in. R,Y,G/12 in. YA,GA) adjustable black faced signal head with mast arm mounting hardware and tunnel visors
1	EA	814	8 in./12 in., one-way, five section (8 in. R,Y,G/12 in. GA) adjustable black faced signal head with mast arm mounting hardware and tunnel visors
2	EA	813	36 in. x 42 in. R10-12 sign for mast arm mounting.
4	EA	813	48 in. x 48 in. W 3-3 "NEW" sign for ground mounting.
2	EA	813	30 in. x 36 in. R 3-5(L) sign with mast arm mounting hardware.
2	EA	813	16 in. x Var. D 3(1) sign with mast arm mounting hardware.
1	EA	813	30 in. x 51 in. shield assembly sign with pole mounting hardware.
1	EA	813	48 in. x 75 in. shield assembly sign with pole mounting hardware.
1	EA	813	30 in. x 51 in. shield assembly sign for ground mounting.
1	EA	813	48 in. x 75 in. shield assembly sign for ground mounting.
2	EA	813	24 in. x 72 in. D-3(3) sign for ground mounting.
1	EA	813	36 in. x 36 in. x 36 in. R 1-2 sign for ground mounting.
4	EA	---	Non-Invasive probe (set of 3) with 750 ft. lead-in cable.
2	EA	806	15 ft. luminaire arm.
2	EA	806	250 W H.P.S. lamp and luminaire.

B. Equipment to be furnished and/or installed by the Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
4	CY	205	Test pit excavation.
13	EA	811	Handhole.
475	LF	810	2-conductor electrical tray cable (No. 12 A.W.G.).
550	LF	810	4-conductor opticom detector cable.
120	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
1750	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
25	LF	810	3-wire (No. 4 A.W.G.) electrical cable.
375	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
900	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
175	LF	805	3 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
200	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - bored.
40	LF	805	4 in. polyvinyl chloride [Schedule 80] electrical conduit - trenched.
14.5	CY	801	Concrete foundation for traffic signal equipment.
5	EA	804	Ground rod - 3/4 in. diameter x 10 ft. length.
1	EA	807	Control and distribution equipment (120/240 V, one phase, three wire system) for a type B-2 underground electrical service.
215	LF	556	24 in. wide HAPPTM - white for stop line.
70	LF	556	5 in. wide yellow pavement marking - paint.
95	LF	556	10 in. wide white pavement marking - paint.
195	LF	812	4 in. x 6 in. wood sign support.
3	EA	---	Remove ground mounted sign.
25	LF	---	Remove existing pavement marking by grinding.
Lump Sum	LS	---	As-built for S.H.A. [on CADD].

CONTACT LIST

The contact persons for District #3 are as follows:

Mr. Majib Shakib  
Assistant District Engineer - Traffic  
301-513-7358

Mr. Augie Rebish  
Assistant District Engineer - Utility  
301-513-7350

Mr. Randy Brown  
Assistant District Engineer - Maintenance  
301-513-7304

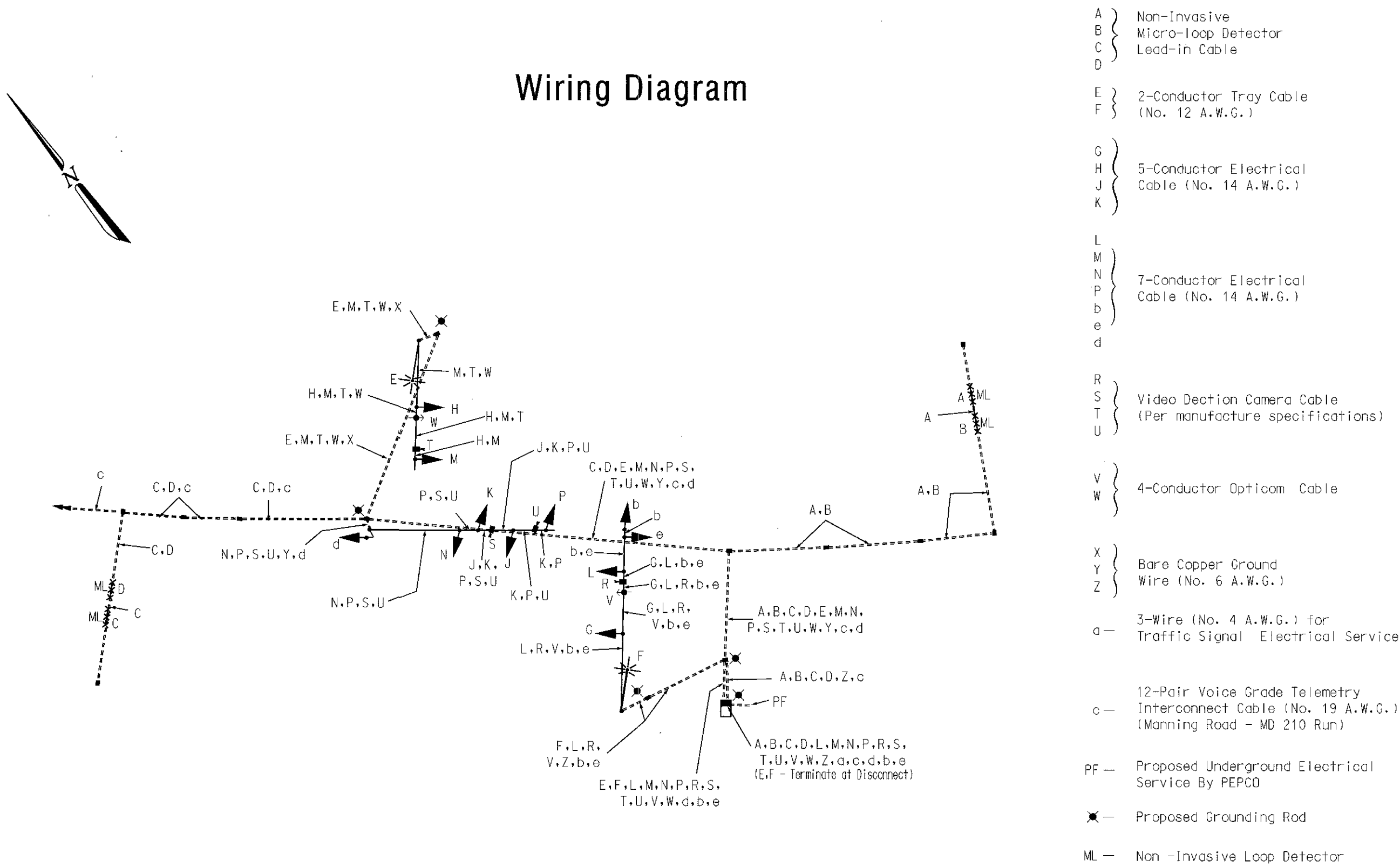
Mr. Richard L. Daff  
Chief, Traffic Operations Division  
410-787-7630

The Power Company Representative is:  
The Potomac Electric and Power Company  
Mr. Beeson  
8300 Old Marlboro Pike  
Upper Marlboro, Maryland 20722  
301-670-4740

Phase Chart

	1	2	3	4	5	6	7	8	36	9	10
Phase 1 & 5	R	R	R	R	R	R	R	R	R	R	R
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6	G	G	G	G	G	G	G	G	G	G	G
Phase 1 & 6	R	R	R	R	R	R	R	R	R	R	R
1 Change	G	G	G	G	G	G	G	G	G	G	G
Phase 2 & 5	R	R	R	R	R	R	R	R	R	R	R
5 Change	R	R	R	R	R	R	R	R	R	R	R
Phase 2 & 6	G	G	G	G	G	G	G	G	G	G	G
2 & 6 Change	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Phase 3	R	R	R	R	R	R	R	R	R	R	R
3 Change	R	R	R	R	R	R	R	R	R	R	R
Phase 4	R	R	R	R	R	R	R	R	R	R	R
4 Change	R	R	R	R	R	R	R	R	R	R	R
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R

Wiring Diagram



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION  
Office of Traffic & Safety  
TRAFFIC ENGINEERING DESIGN DIVISION

(General Information Plan)

MD 228 at Manning Road

DRAWN BY: Frank Hoeckel  
CHECKED BY:  
SCALE: N/A  
DATE: September 17, 2002

F.A.P. NO. N/A  
S.H.A. NO. BW996M82  
COUNTY: Prince George's  
LOG MILE: 160228.0054

TS NO. 4196  
T.I.M.S. NO. F-238

SHEET NO. 2 OF 3